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| 09/415,467      | 10/08/1999  | MYRON J. BRUDNICKI   | 050-98-021          | 4865             |

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/415,467

Applicant(s)

BRUDNICKI, MYRON J.

Examiner

Julian A. Mercado

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 9 is/are rejected.
- 7) ☐ Claim(s) 5 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Remarks*

This Office Action is responsive to applicant's amendment filed January 15, 2002.

The rejection of claims 1 and 3 under 35 U.S.C. 102(b) based on Maru has been withdrawn in view of applicant's amendment to independent claim 1 now reciting that both the top and bottom sides of each fuel cell is in direct contact with the receptacle. In Maru, only the topmost and bottommost fuel cell of the stack, and thus not each of the fuel cells within the stack, contacts the receptacle in the claimed configuration. The rejection of claim 6 under 35 U.S.C. 102(b) based on Maru has also been withdrawn in view of applicant's amendment reciting that the each of the ports and port interfaces have individual fluidic connections. In Maru, the ports [21a] share a common port interface [41].

The rejection of claims 1-4 under 35 U.S.C. 102(b) has been withdrawn in view of applicant's amendment to the present claims as noted above. Each of the fuel cells in Van Linden is not taught or suggested to be in direct contact with the receptacle on its top and bottom sides.

The rejection of claims 1, 2, and 4-8 under 35 U.S.C. 102(b), and the rejection of claim 9 under 35 U.S.C. 103(a), based on Reichner have been withdrawn in view of applicant's amendment to the present claims now reciting that both the top and bottom sides or the opposing sides of each fuel cell is in direct contact with the receptacle. Notably, in Reichner, while a plurality of fuel cells [2] each having individual ports [30] are positioned so that the ports are interfaced with the manifolds and thereby in direct contact with the manifolds, the ports of the

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tubular fuel cells are connected solely on one side and therefore not on both the top and bottom side or on opposing sides.

***Claim Rejections - 35 USC § 102 and 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Linden.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Linden.

The rejection is maintained for the reasons of record and for the additional reasons to follow. The scope of independent claim 6 is noted to be a broader variation of independent claim 1 in that "opposing sides" (and not "top and bottom sides") of the fuel cells are interfaced with the ports. In Van Linden, opposing lateral sides of the fuel cells are interfaced with the ports [10a,b, 11a,b, 13a,b, 14a,b,15a,b]. Each of the ports has individual fluidic connections with the manifolds or port interfaces [5a, 5b, 6a, 6b, 7a, 7b] as can be appreciated from Figure 1.

(new rejection) Claims 1-4, 6, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gardner et al. (U.S. Pat. 5,595,833).

Regarding independent claims 1 and 6 and dependent claims thereto as further noted, Gardner et al. teaches a fuel cell receptacle [12] with a plurality of manifolds [14]. (Figure 10, col. 5 line 10-16) A plurality of fuel cells [24] defining a stack each have individual ports, i.e. distribution members on both opposing ends are positioned so that the ports are interfaced with the manifolds and thereby in direct contact with the manifolds. (col. 9 line 9-20, also applies to

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dependent claims 2, 3) Figures 6A-6D show that a first stack of fuel cells [24] are staggered, i.e. stacked alternately perpendicularly relative to a second stack of fuel cells [26]. (col. 6 line 23-30, applies to dependent claim 4, 7) O-ring seals are employed as part of the manifold assembly. (col. 15 line 3-31)

### *Allowable Subject Matter*

Claims 5 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record and to the examiner's knowledge do not teach or render obvious at least to the skilled artisan the instant invention regarding a spiral or spiral stack configuration.

Combining the teachings of Gardner et al. so as to result in a spiral configuration, as taught by Reichner, is not deemed an obvious modification since Gardner et al. employs tubular fuel cells arranged in planar modules [24] and [26], while the tubular fuel cells in Reichner are individually connected in series. Refer to Figures 6A-6D and Figure 1, respectively.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Patrick Ryan  
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Technology Center 1700